

SEQUENCE LISTING

<110> Browse, John et al.

<120> Desaturases and Methods of Using Them for Synthesis of
Polyunsaturated Fatty Acids

<130> 53860

<140>

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<150> 60/111,301

<151> 1998-12-07

<160> 13

<170> PatentIn Ver. 2.0

<210> 1

<211> 1461

<212> DNA

<213> Caenorhabditis elegans

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<210> 2

<211> 447

<212> PRT

<213> Caenorhabditis elegans

<400> 2

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 Leu Lys Lys Glu Cys Pro Thr Gln Glu Pro Glu Ile Pro Asp Ile Lys
 65 70 75 80
 Asp Asp Pro Ile Lys Gly Ile Asp Asp Val Asn Met Gly Thr Phe Asn
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 Ile Ser Glu Lys Arg Ser Ala Gln Ile Asn Lys Ser Phe Thr Asp Leu
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 Arg Met Arg Val Arg Ala Glu Gly Leu Met Asp Gly Ser Pro Leu Phe
 115 120 125
 Tyr Ile Arg Lys Ile Leu Glu Thr Ile Phe Thr Ile Leu Phe Ala Phe
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 Tyr Leu Gln Tyr His Thr Tyr Tyr Leu Pro Ser Ala Ile Leu Met Gly
 145 150 155 160
 Val Ala Trp Gln Gln Leu Gly Trp Leu Ile His Glu Phe Ala His His
 165 170 175
 Gln Leu Phe Lys Asn Arg Tyr Tyr Asn Asp Leu Ala Ser Tyr Phe Val
 180 185 190
 Gly Asn Phe Leu Gln Gly Phe Ser Ser Gly Gly Trp Lys Glu Gln His
 195 200 205
 Asn Val His His Ala Ala Thr Asn Val Val Gly Arg Asp Gly Asp Leu
 210 215 220
 Asp Leu Val Pro Phe Tyr Ala Thr Val Ala Glu His Leu Asn Asn Tyr
 225 230 235 240
 Ser Gln Asp Ser Trp Val Met Thr Leu Phe Arg Trp Gln His Val His
 245 250 255
 Trp Thr Phe Met Leu Pro Phe Leu Arg Leu Ser Trp Leu Leu Gln Ser
 260 265 270
 Ile Ile Phe Val Ser Gln Met Pro Thr His Tyr Tyr Asp Tyr Tyr Arg
 275 280 285
 Asn Thr Ala Ile Tyr Glu Gln Val Gly Leu Ser Leu His Trp Ala Trp
 290 295 300
 Ser Leu Gly Gln Leu Tyr Phe Leu Pro Asp Trp Ser Thr Arg Ile Met
 305 310 315 320
 Phe Phe Leu Val Ser His Leu Val Gly Gly Phe Leu Leu Ser His Val
 325 330 335
 Val Thr Phe Asn His Tyr Ser Val Glu Lys Phe Ala Leu Ser Ser Asn
 340 345 350

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Arg Pro Gly Arg Phe Ile Asp Trp Leu Trp Gly Gly Leu Asn Tyr Gln
370 375 380

Ile Glu His His Leu Phe Pro Thr Met Pro Arg His Asn Leu Asn Thr
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Val Met Pro Leu Val Lys Glu Phe Ala Ala Ala Asn Gly Leu Pro Tyr
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<213> Euglena gracilis

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aagggatgcc actgatgcct tcatggttat gcactttcaa gaagccttcg acaagctcaa 180
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 35 40 45
 Met His Phe Gln Glu Ala Phe Asp Lys Leu Lys Arg Met Pro Lys Ile
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 Asn Pro Ser Phe Glu Leu Pro Pro Gln Ala Ala Val Asn Glu Ala Gln
 65 70 75 80
 Glu Asp Phe Arg Lys Leu Arg Glu Glu Leu Ile Ala Thr Gly Met Phe
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 Asp Ala Ser Pro Leu Trp Tyr Ser Tyr Lys Ile Ser Thr Thr Leu Gly
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 Ile Gly Ala Val Leu Leu Gly Met His Tyr Gln Gln Met Gly Trp Leu
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 145 150 155 160
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 180 185 190
 Gln Gly His Asp Pro Asp Ile Asp Asn Leu Pro Pro Leu Ala Trp Ser
 195 200 205
 Glu Asp Asp Val Thr Arg Ala Ser Pro Ile Ser Arg Lys Leu Ile Gln
 210 215 220
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 225 230 235 240
 Trp Cys Phe Gln Cys Val Leu Thr Val Arg Ser Leu Lys Asp Arg Asp
 245 250 255
 Asn Gln Phe Tyr Arg Ser Gln Tyr Lys Lys Glu Ala Ile Gly Leu Ala
 260 265 270
 Leu His Trp Thr Leu Lys Ala Leu Phe His Leu Phe Phe Met Pro Ser
 275 280 285
 Ile Leu Thr Ser Leu Leu Val Phe Phe Val Ser Glu Leu Val Gly Gly
 290 295 300
 Phe Gly Ile Ala Ile Val Val Phe Met Asn His Tyr Pro Leu Glu Lys
 305 310 315 320
 Ile Gly Asp Pro Val Trp Asp Gly His Gly Phe Ser Val Gly Gln Ile
 325 330 335
 His Glu Thr Met Asn Ile Arg Arg Gly Ile Ile Thr Asp Trp Phe Phe
 340 345 350
 Gly Gly Leu Asn Tyr Gln Ile Glu His His Leu Trp Pro Thr Leu Pro

355 360 365
 Arg His Asn Leu Thr Ala Val Ser Tyr Gln Val Glu Gln Leu Cys Gln
 370 375 380
 Lys His Asn Leu Pro Tyr Arg Asn Pro Leu Pro His Glu Gly Leu Val
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<220>
 <221> variation
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<211> 34

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: PCR Primer

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<210> 9

<211> 6

<212> RNA

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<223> Description of Artificial Sequence:
Polyadenylation Signal

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<210> 10

<211> 20

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: PCR Primer

<400> 10

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<210> 11

<211> 9

<212> RNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Histidine box

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<223> Description of Artificial Sequence: Histidine Box

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His Xaa Xaa His His
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<210> 13
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Histidine Box

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<223> Xaa = any amino acid

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